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EXAMINER	
GAY, JENNIFER HAWKINS	
ART UNIT	**PAPER NUMBER**
3672	

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/763,298	MULLEN ET AL.	
	Examiner	Art Unit	
	Jennifer H. Gay	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-16,18-25,27-36,38-41,43-51 and 53-56* is/are rejected.

7)☒ Claim(s) *7,17,26,28,37,42 and 52* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6 and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (US 6,220,345) in view of Thomeer et al. (US 5,933,945).

Regarding claim 1: Jones et al. discloses a gravel packing apparatus that includes the following features:

- An outer tubular **18** having a plurality of openings therethrough.
- A sand control screen assembly **17, 30** disposed within the outer tubular. The assembly prevents the flow of particulate material of a predetermined size but allows the flow of production fluids.

Jones et al. discloses all of the limitations of the above claims except for the apparatus including a sensor operatively coupled to the outer tubular or screen assembly.

Thomeer et al. discloses a composite screen (4:42-47). Thomeer et al. further teaches placing sensors between the layers of the screen (6:50-7:3).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Jones et al. to include sensors operatively coupled to the screen assembly as taught by Thomeer et al. in order to have been able to monitor either the condition of the screen itself or the properties of the fluid passing therethrough.

Regarding claims 2, 39: Thomeer et al. further teaches instrument lines disposed within the screen assembly where the lines are operatively associated with the sensor.

Regarding claim 3: The apparatus of Jones et al. includes a slurry passageway (5:25-30) between the outer tubular and the screen assembly.

Regarding claims 4, 6, 40, 41: The instrument line of Thomeer et al. is disposed within the layers of the composite screen therefore could be located in any portion of the assembly of Jones et al.

Regarding claim 5: The apparatus of Jones et al. includes a production pathway **19** disposed between the outer tubular and the screen assembly.

Regarding claim 38: Jones et al. further discloses a gravel packing method using the above apparatus.

3. Claims 8-11 and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. in view of Thomeer et al. as applied to claims 1 and 38 above, and further in view of Ross (US 6,065,535).

Regarding claims 8, 9, 43, 44: Jones et al. and Thomeer et al. disclose all of the limitations of the above claims except for the apparatus including a power source either downhole or at the surface.

Ross discloses a gravel packing system. Ross further teaches the system including a power source where the power source could be a downhole battery or surface power (6:27:33).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Jones et al. in view of Thomeer et al. to include a power source as taught by Ross in order to have provided the needed power to the downhole sensors

Regarding claims 10, 45: Jones et al. and Thomeer et al. disclose all of the limitations of the above claims except for what type of sensor is used.

Ross further discloses using a downhole pressure, temperature, or resistivity sensor (6:8-18).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Jones et al. in view of Thomeer et al. such that the sensor was a pressure, temperature, or density sensor as taught by Ross in order to have provided a means for monitoring the wellbore and produced fluids thus having a means for gravel packing the correct formation.

Regarding claims 11, 46: Jones et al. and Thomeer et al. disclose all of the limitations of the above claims except for the sensor being coupled to a memory, microprocessor, transceiver, or actuator.

Ross further discloses that the sensor is coupled to a processor that can be an integrated circuit, a microprocessor, a microcomputer, or a combination thereof.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Jones et al. in view of Thomeer et al. to include one of the above components as taught by Ross in order to have provided a means for gathering, storing, and processing data collected by the sensors.

4. Claims 12-16, 22-25, 27, and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. in view of Thomeer et al. and Grigsby et al. (US 2005/0072564).

Regarding claims 12, 27: Jones et al. discloses a gravel packing apparatus that includes the following features:

- A first and second joint that each has an outer tubular **18** having a plurality of openings therethrough, a base pipe **17** disposed within the outer tubular, and a filter material **30** disposed the outer tubular and the base pipe. The assembly prevents the flow of particulate material of a predetermined size but allows the flow of production fluids.
- A coupling that couples the first and second joints together (not shown).

Jones et al. discloses all of the limitations of the above claims except for the apparatus including a sensor and instrument line operatively coupled to the outer tubular or screen assembly.

Thomeer et al. discloses a composite screen (4:42-47). Thomeer et al. further teaches placing sensors between the layers of the screen (6:50-7:3). Thomeer et al. further teaches instrument lines disposed within the screen assembly where the lines are operatively associated with the sensor.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Jones et al. to include

sensors and instrument lines operatively coupled to the screen assembly as taught by Thomeer et al. in order to have been able to monitor either the condition of the screen itself or the properties of the fluid passing therethrough and transmit those conditions to the surface.

Jones et al. and Thomeer et al. discloses all of the limitations of the above claims except for connectors for connecting respective ends of the instrument lines.

Grigsby et al. discloses a gravel packing assembly. Grigsby et al. further teaches connectors **34, 36** for instrument lines **30** that are run through the gravel packing assembly.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Jones et al. in view of Thomeer et al. to include the instrument line connectors taught by Grigsby et al. in order to have provided a means for forming the joints on the surface with the instrument lines already placed in each joint thus eliminating the need to run long lengths of line into the wellbore.

Regarding claim 13: The apparatus of Jones et al. includes a slurry passageway (5:25-30) between the outer tubular and the screen assembly.

Regarding claims 14, 16: The instrument line of Thomeer et al. is disposed within the layers of the composite screen therefore could be located in any portion of the assembly of Jones et al.

Regarding claim 15: The apparatus of Jones et al. includes a production pathway **19** disposed between the outer tubular and the screen assembly.

Regarding claims 22, 23, 25, 33, 34, 36: The joints of Jones et al. are typical joints thus will coupled via threaded collars.

Regarding claims 24, 35: Jones et al. discloses all of the limitations of the above claims except for the coupling being a ratchet latch. However, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have coupled the joints together in any known fashion, as applicant has not indicated that a ratchet latch provides any advantage over traditional latching or coupling means.

5. Claims 18-21 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. in view of Thomeer et al. and Grigsby et al. as applied to claims 12 and 22 above, and further in view of Ross.

Regarding claims 18, 19, 29, 30: Jones et al., Thomeer et al., and Grigsby et al. disclose all of the limitations of the above claims except for the apparatus including a power source either downhole or at the surface.

Ross discloses a gravel packing system. Ross further teaches the system including a power source where the power source could be a downhole battery or surface power (6:27:33).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Jones et al. in view of Thomeer et al. and Grigsby et al. to include a power source as taught by Ross in order to have provided the needed power to the downhole sensors

Regarding claims 20, 31: Jones et al., Thomeer et al., and Grigsby et al. disclose all of the limitations of the above claims except for what type of sensor is used.

Ross further discloses using a downhole pressure, temperature, or resistivity sensor (6:8-18).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Jones et al. in view of Thomeer et al. and Grigsby et al. such that the sensor was a pressure, temperature, or density sensor as taught by Ross in order to have provided a means for monitoring the wellbore and produced fluids thus having a means for gravel packing the correct formation.

Regarding claims 21, 32: Jones et al., Thomeer et al., and Grigsby et al. disclose all of the limitations of the above claims except for the sensor being coupled to a memory, microprocessor, transceiver, or actuator.

Ross further discloses that the sensor is coupled to a processor that can be an integrated circuit, a microprocessor, a microcomputer, or a combination thereof.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Jones et al. in view of

Thomeer et al. and Grigsby et al. to include one of the above components as taught by Ross in order to have provided a means for gathering, storing, and processing data collected by the sensors.

6. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grigsby et al. in view of Thomeer et al.

Grigsby et al. discloses a method for treating an interval of a wellbore. The method involves the following steps:

- Coupling a first and second joint of a gravel packing apparatus **12**. Each joint includes a perforated tubular (not shown), a filter medium **48**, and an instrument line **30** disposed therein and having ends that extend outwardly therefrom.
- Connecting the ends of the instrument lines via connectors **34**, **36** from respective joints of the apparatus.
- Locating the apparatus within the interval to form an annulus.
- Injecting treatment fluid into the annulus.

Grigsby et al. discloses all of the limitations of the above claims except for the apparatus including sensors operatively associated with each joint where the sensors are used to monitor the treatment process.

Thomeer et al. discloses a composite screen (4:42-47). Thomeer et al. further teaches placing sensors between the layers of the screen (6:50-7:3). Thomeer et al. further teaches instrument lines disposed within the screen assembly where the lines are operatively associated with the sensor.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Grigsby et al. to include sensors and instrument lines operatively coupled to the screen assembly as taught by Thomeer et al. in order to have been able to monitor either the condition of the screen itself or the properties of the fluid passing therethrough and transmit those conditions to the surface.

7. Claims 48-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grigsby et al. in view of Thomeer et al. as applied to claim 47 above, and further in view of Jones et al.

Regarding claim 48: Grigsby et al. and Thomeer et al. discloses all of the limitations of the above claims except for the apparatus including an outer tubular and a sand screen assembly for each joint.

Jones et al. discloses a gravel packing apparatus. Jones et al. further teaches that the apparatus includes an outer tubular **17** and a screen assembly **17, 30** disposed therein.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the gravel packing assembly of Grigsby et al. in view of Thomeer et al. to include the outer tubular and screen assembly of Jones et al. in order to have deliver gravel to several different areas of the wellbore thus eliminating the need to withdraw the assembly after each gravel packing operation (2:48-60).

Regarding claims 49-51: The apparatus of Jones et al. includes a slurry passageway (5:25-30) and a production pathway **19**. The instrument line of Thomeer et al. is disposed within the layers of the composite screen therefore could be located in any portion of the assembly of Jones et al.

8. Claims 53-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grigsby et al. in view of Thomeer et al. as applied to claim 47 above, and further in view of Ross.

Regarding claims 53, 54: Grigsby et al. and Thomeer et al. discloses all of the limitations of the above claims except for the apparatus including a power source either downhole or at the surface.

Ross discloses a gravel packing system. Ross further teaches the system including a power source where the power source could be a downhole battery or surface power (6:27:33).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Grigsby et al. in view of Thomeer et al. to include a power source as taught by Ross in order to have provided the needed power to the downhole sensors

Regarding claim 55: Grigsby et al. and Thomeer et al. discloses all of the limitations of the above claims except for what type of sensor is used.

Ross further discloses using a downhole pressure, temperature, or resistivity sensor (6:8-18).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Grigsby et al. in view of Thomeer et al. such that the sensor was a pressure, temperature, or density sensor as taught by Ross in order to have provided a means for monitoring the wellbore and produced fluids thus having a means for gravel packing the correct formation.

Regarding claim 56: Grigsby et al. and Thomeer et al. discloses all of the limitations of the above claims except for the sensor being coupled to a memory, microprocessor, transceiver, or actuator.

Ross further discloses that the sensor is coupled to a processor that can be an integrated circuit, a microprocessor, a microcomputer, or a combination thereof.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of Grigsby et al. in view of Thomeer et al. to include one of the above components as taught by Ross in order to have provided a means for gathering, storing, and processing data collected by the sensors.

Allowable Subject Matter

9. Claims 7, 17, 26, 28, 37, 42, and 52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. In view of applicant's amendment, the objection to the specification and the 35 USC 112(2) rejection of claims 27-37 has been withdrawn.

11. The Terminal Disclaimer filed November 9 2005 has been approved and entered. The Double Patenting rejection presented in the previous Office Action has been withdrawn accordingly.

12. Applicant's arguments filed November 9 2005 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine Thomeer with the other cited references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine the references can be found in column 6, line 66 through column 7, line 3 of Thomeer where it is specifically stated that sensors are incorporated into the tubular to monitor the conditions of the tubular.

Applicant has further argued that Thomeer does not teach a separate filter medium placed around the composite tubular. While the examiner agrees with this statement, it is noted that Thomeer was used merely to teach a sensor deployed within the layers of a filtering system. Further, the inner layer can be considered the screen with the outer layer the outer tubular member.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H. Gay whose telephone number is (571) 272-7029. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and Friday, 6:30-1:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer H Gay
Primary Examiner
Art Unit 3672

JHG
December 12, 2005